

AMENDMENTS TO THE CLAIMS:

1. (Original) A moving picture indexing and searching method using a motion activity describing method, comprising the steps of:

describing a motion feature information in terms of a video name, a time stamp and an f-code which is a motion feature range; and

indexing and searching a moving picture using said motion feature information.

2. (Original) The method of claim 1, wherein said video name has a plurality of time stamps and a f\_code.

3. (Original) A moving picture indexing and searching method using a motion activity describing method, comprising the steps of:

describing a motion feature information in terms of a video name and a time stamp, and a frequency of an Inter mode of No\_MC, a frequency of an Intra mode of No\_MC and a frequency of an MC mode obtained by a selected process; and

indexing and searching a moving picture using said motion feature information.

4. (Original) The method of claim 3, wherein said video name has a plurality of time stamps, a frequency of an Inter mode of a No\_MC, a frequency of an Intra mode of a No\_MC, and a frequency of an MC mode.

5. (Currently Amended) The method of claim 3, wherein said selected process comprises:

a first step of determining whether an MB\_Mode is a No\_MC mode;

a second step of determining whether MB\_Mode is No\_MC\_inter mode, if MB\_Mode is determined as No\_MC mode in said first step;

a third step of increasing counting value (no\_mc\_inter) of a counter for counting a frequency of No\_MC\_Inter mode and determining whether a current MB is a last MB, if MB\_Mode is determined as No\_MC\_Inter mode in said second step, and determining whether MB\_Mode is No\_MC\_Intra mode if MB\_Mode is not determined as No\_MC\_Inter mode;

a fourth step of increasing counting value (no\_mc\_intra) of a counter for counting a frequency of No\_MC\_Intra mode and determining whether a current MB is a last MB, if MB\_Mode is determined as No\_MC\_Intra mode in said third step, and increasing counting value (mc) of a counter for counting a frequency of MC mode and determining whether a current MB is a last MB, if MB\_Mode is not determined as No\_MC mode in said third step; and

a fifth step of increasing number of macro blocks (TotMBs) used in a motion feature range and repeatedly performing said first to third steps if said current MB is not determined as a last MB in said fourth step, and if said current MB is determined as a last MB in said fourth step, obtaining a frequency (No\_MC\_Inter\_Ratio) of Inter mode of No\_MC, frequency (Intra\_Ratio) of Intra mode of No\_MC, ~~if said current MB is determined as a last MB in said fourth step~~, according to the following Equations:

[Equation]

$$\text{No\_MC\_Inter\_Ratio} = \text{no\_mc\_inter}/\text{TotMBs}$$

$$\text{Intra\_Ratio} = \text{no\_mc\_intra}/\text{TotMBs}$$

$$\text{MC\_Ratio} = \text{mc}/\text{TotMBs}$$

6. (Original) A moving picture indexing and searching method using a motion activity describing technique, comprising the steps of:

describing a motion feature information based on a video name, a time stamp and a frequency of an Inter mode of a No\_MC obtained by a selected process; and indexing and searching a moving picture using said motion feature information.

7. (Original) The method of claim 6, wherein said video name has a plurality of time stamps and a frequency of an Inter mode of an No\_MC.

8. (Currently Amended) The method of claim 6, wherein said selected process comprises:

a first step of increasing counting value (mc\_nc\_inter) of a counter for counting a frequency of No\_MC\_Inter mode and determining whether a current MB is a last MB if said MB\_Mode is No\_MC mode and No\_MC\_Inter mode; and

a second step of increasing number of macroblocks (TotMBs) used in a motion feature range and repeatedly performing said first step if said current MB is not determined as a last MB in said first step, and if said current MB is the last MB, obtaining a frequency (No\_MC\_Inter\_Ratio) of Inter mode of No\_MC according to the following Equation, ~~if said current MB is the last MB~~:

[Equation]

$$\text{No\_MC\_Inter\_Ratio} = \text{no\_mc\_inter} / \text{TotMBs}$$

9. (Original) A moving picture indexing and searching method using a motion activity describing technique, comprising the steps of:

describing a motion feature information based on a video name, a time stamp and a frequency of an Intra mode of a No\_MC obtained by a selected process; and indexing and searching a moving picture using said motion feature information.

10. (Original) The method of claim 9, wherein said video name has a plurality of name information and a frequency of Intra mode of a No\_MC.

11. (Currently Amended) The method of claim 9, wherein said selected process comprises:

a first step of increasing counting value(mc\_nc\_intra) of a counter for counting a frequency of No\_MC\_Intra mode and determining whether a current MB is a last MB if said MB\_Mode is No\_MC mode and No\_MC\_Intra mode; and

a second step of increasing number of macro blocks (TotMBs) used in a motion feature range and repeatedly performing said first step if said current MB is not determined as a last MB in said first step, and if said current MB is the last MB, obtaining frequency (Intra\_Ratio) of Intra mode of No\_MC according to the following Equation,~~if said current MB is the last MB.;~~

~~[Equation]~~

$$\text{Intra\_Ratio} = \text{no\_mc\_intra} / \text{TotMBs}.$$

12. (Original) A moving picture indexing and searching method using a motion activity describing technique, comprising the steps of:

describing a motion feature information based on a video name, a time stamp and a frequency of an MC mode obtained by a selected process; and

indexing and searching a moving picture using said motion feature information.

13. (Original) The method of claim 12, wherein said video name has a frequency of a plurality of time stamps and a frequency of an MC mode.

14. (Currently Amended) The method of claim 12, wherein said selected process comprises:

a first step of increasing counting value(mc) of a counter for counting a frequency of MC mode and determining whether a current MB is a last MB if said MB\_Mode is not No\_MC mode; and

a second step of increasing number of macro blocks (TotMBs) used in a motion feature range and repeatedly performing said first step if said current MB is not determined as a last MB in said first step, and if said current MB is the last MB, obtaining a frequency (MC\_Ratio) with respect to MC mode according to the following Equation;  
~~if said current MB is the last MB.;~~

[Equation]

$$MC\_Ratio = mc/TotMBs.$$

15. (Currently Amended) A moving picture indexing and searching method using a motion activity describing technique, comprising the steps of:

describing a feature information based on a video name and a time stamp and a frequency of an MC\_Coded mode and a frequency of an MC\_Not\_[[c]]Coded mode obtained by a selected process; and

indexing and searching a moving picture using said feature information.

16. (Original) The method of claim 15, wherein said video name has a plurality of time stamps, a frequency of an MC\_coded mode and a frequency of an MC\_Not\_Coded mode.

17. (Currently Amended) The method of claim 15, wherein said selected process comprises:

a first step of determining whether MB\_Mode is MC mode;

a second step of determining whether MB\_Mode is MC\_Coded mode, if said MB\_Mode is determined as MC mode in said first step;

a third step of determining whether a current MB is a last MB by increasing counting value (mc\_not\_coded) of a counter for counting a frequency of MC\_Not\_Coded mode, if said MB\_Mode is not determined as MC\_Coded mode in said second step, and increasing counting value (mc\_coded) of a counter for counting a frequency of MC\_Coded mode and further increasing counting value(mc) of a counter for counting a frequency of MC mode;

a fourth step of increasing number of macro blocks (TotMBs) used in a motion feature range and repeatedly performing said first to third steps if said current MB is determined as not a last MB in said third step, and if said current MB is the last MB, obtaining a frequency (MC\_Coded\_Ratio) of the MC\_Coded mode and a frequency (MC\_Not\_Coded\_Ratio) of the Not\_Coded mode according to the following Equation, ~~if said current MB is the last MB~~. Equations:

{Equation}

$$MC\_Coded\_Ratio = mc\_coded/mc$$

$$MC\_Not\_Coded\_Ratio = mc\_not\_coded/mc$$

18. (Original) A moving picture indexing and searching method using a motion activity technique, comprising the steps of:

describing a feature information based on a video name, a time stamp and a frequency of an MC\_Coded mode and a frequency of an MC\_Not\_Coded mode; and

measuring a similarity by comparing the frequency of MC\_Coded mode of a moving picture of a smaller f\_code with the frequency of MC\_Coded mode of a larger f\_code or with the frequency of MC\_Not\_Coded mode with respect to a moving picture

having different f\_codes, and indexing and searching a moving picture using said feature information.

19. (Original) The method of claim 18, wherein said video name has a plurality of time stamps, a frequency of MC\_Coded mode and a frequency of MC\_Not\_Coded mode.

20. (Currently Amended) The method of claim 18, wherein said selected process comprises:

a first step of determining whether MB\_Mode is MC mode;

a second step of determining whether said MB\_Mode is MC\_Coded mode, if said MB\_Mode is determined as MC mode in said first step;

a third step of increasing counting value (mc\_not\_coded) of a counter for counting a frequency of MC\_Not\_Coded mode if said MB\_Mode is not determined as MC\_Coded mode in said second step, and increasing counting value (mc\_coded) of a counter for counting a frequency of MC\_Coded mode, increasing counting value(mc) of a counter for counting MC mode, and determining whether a current MB is a last MB if said MB\_Mode is determined as MC\_Coded mode in said second step; and

a fourth step of increasing number of macro blocks (TotMBs) used in a motion feature range and repeatedly performing said first to third steps if said current MB is not determined as a last MB in said third step, and if said MB is determined as a last MB in said third step, obtaining a frequency (MC\_Coded\_Ratio) of MC\_Coded mode and a frequency (MC\_Not\_Coded\_Ratio) of Not\_Coded mode according to the following Equation if said MB is determined as a last MB in said third step. Equations:

{Equation}

$$\text{MC\_Coded\_Ratio} = \text{mc\_coded}/\text{mc}$$

$$\text{MC\_Not\_Coded\_Ratio} = \text{mc\_not\_coded}/\text{mc}$$

21. (Original) A moving picture indexing and searching method using a motion activity describing technique, comprising the steps of:

describing a motion feature information in terms of a video name, a time stamp and a frequency of Inter mode of No\_MC obtained by a selected process, a frequency of Intra mode of said No\_MC, a frequency of MC mode, a frequency of a Coded mode with respect to MC mode and a frequency of Not\_Coded mode with respect to MC mode; and indexing and searching a moving picture using said motion feature information.

22. (Original) The method of claim 21, wherein said video name has a frequency of a plurality of time stamps, a frequency of Inter mode of No\_MC, a frequency of Intra mode of No\_MC, a frequency of MC mode, a frequency of Coded mode with respect to Inter mode, a frequency of MC mode, a frequency of Coded mode with respect to MC mode, and a frequency of Not\_Coded mode with respect to MC mode.

23. (Currently Amended) The method of claim 21, wherein said selected process comprises:

a first step of determining whether MB\_Mode is No\_MC mode;

a second step of determining whether said MB\_Mode is No\_MC inter mode, if said MB\_Mode is determined as No\_MC mode in said first step;

a third step of increasing counting value (no\_mc\_inter) of a counter for counting a frequency of No\_MC\_Inter mode if said MB\_Mode is determined as No\_MC\_Inter mode in said second step, and determining whether MB\_Mode is No\_MC\_Intra mode if said MB\_Mode is not determined as No\_MC\_Inter mode in said second step;

a fourth step of increasing counting value(no\_mc\_intra) of a counter for counting a frequency of No\_MC\_Intra mode if said MB\_Mode is determined as No\_MC\_Intra



mode in said third step, and determining whether MB\_Mode is MC mode if said

MB\_Mode is not determined as No\_MC\_Intra mode;

a fifth step of determining whether said MB\_Mode is MC\_Coded mode if said

MB\_Mode is determined as MC mode in said fourth step;

a sixth step of increasing counting value (mc\_not\_coded) of a counter for counting a frequency of MC\_Not\_Coded mode if said MB\_Mode is not determined as MC\_Coded mode in said fifth step, and increasing counting value (mc\_coded) of a counter for counting a frequency of MC\_Coded mode, increasing counting value (mc) of a counter for counting a frequency of MC mode, and determining whether a current MB is a 1st MB if said MB\_Mode is determined as MC\_Coded mode in said fifth step; and

a seventh step of increasing number of macro blocks (TotMBs) used in a motion feature range and repeatedly performing said first to sixth steps if said current MB is not determined as a last MB in said sixth step, and if said MB is determined as a last MB in said sixth step, obtaining a frequency(No\_MC\_Inter\_Ratio) of Inter mode of No\_MC, a frequency(Intra\_Ratio) of Intra mode of No\_MC, a frequency (MC\_Ratio) with respect to MC mode, a frequency(MC\_Coded\_Ratio) of MC\_Coded mode, and a frequency(MC\_Not\_Coded\_Ratio) of Not\_Coded mode according to the following Equation if said MB is determined as a last MB in said sixth step. Equations:

{Equation}

$$\text{No\_MC\_Inter\_Ratio} = \text{no\_mc\_inter}/\text{TotMBs}$$

$$\text{Intra\_Ratio} = \text{no\_mc\_intra}/\text{totMBs}$$

$$\text{MC\_Ratio} = \text{mc}/\text{TotMBs}$$

$$\text{MC\_Coded\_Ratio} = \text{mc\_coded}/\text{mc}$$

$$\text{MC\_Not\_Coded\_Ratio} = \text{mc\_not\_coded}/\text{mc}$$

24. (Original) A moving picture indexing and searching method using a motion activity describing technique, comprising the steps of:

classifying a motion vector of a macro block having a video name, time stamp, MC\_Not\_Coded mode, MC\_Coded mode and No\_MC\_Inter mode in accordance with f\_code, describing in terms of f\_code frequency obtained by a selected process, measuring a similarity by comparing each f\_code frequency, and indexing and searching a moving picture using said motion feature information.

25. (Currently Amended) The method of claim 24, wherein said selected step comprises:

a first step of determining whether the MB\_Mode is an MC\_Mode;

a second step of increasing a counting value (f\_code\_c[1]) of a counter of f\_code 1 and determining whether a current MB is a last MB if the MB\_Mode is determined as Inter mode of No\_MC mode;

a third step of selecting the largest X-axis motion vector (mv\_x) and the largest Y-axis motion vector (mv\_y) as a largest motion vector (max\_mv), obtaining a maximum value k of f\_code by the selected max\_mv/16, increasing the counting value (f\_code\_c[k]) of the obtained f\_counter, and determining whether a current MB is the last MB if MB\_Mode is determined as MC\_Mode in said first step; and

a fourth step of increasing a number of macro block used in a motion feature range, repeatedly performing said first to third steps, and if a current MB is the last MB, obtaining a frequency of f\_code according to the following Equation ~~if a current MB is the last MB~~:

{Equation}

$$f\_code\_ratio[k] = f\_code\_c[k] / TotMBs.$$

26. (Original) A moving picture indexing and searching method using a motion activity describing technique, comprising the steps of:

classifying a motion vector of a macro block having a video name, time stamp, MC\_Not\_Coded mode, MC\_Coded mode and No\_MC\_Inter mode in accordance with f\_code, describing in terms of f\_code frequency obtained by a selected process, measuring a similarity by comparing each f\_code frequency with an at least one adjacent f\_code frequency, and indexing and searching a moving picture using said motion feature information.

27. (Currently Amended) The method of claim 26, wherein said selected step comprises:

a first step of determining whether the MB\_Mode is an MC\_Mode;

a second step of increasing a counting value (f\_code\_c[1]) of a counter of f\_code 1 and determining whether a current MB is a last MB if the MB\_Mode is determined as Inter mode of No\_MC mode;

a third step of selecting the largest X-axis motion vector (mv\_x) and the largest Y-axis motion vector (mv\_y) as a largest motion vector(max\_mv), obtaining a maximum value k of f\_code by the selected max\_mv/16, increasing the counting value (f\_code\_c[k]) of the obtained f\_counter, and determining whether a current MB is the last MB if MB\_Mode is determined as MC\_Mode in said first step; and

a fourth step of increasing a number of macro block used in a motion feature range, repeatedly performing said first to third steps, and if a current MB is not determined as a last MB in said second and third steps, obtaining a frequency of f\_code according to the following Equation ~~if a current MB is not determined as a last MB in said second and third steps~~:

{Equation}

$$f\_code\_ratio[k] = f\_code\_c[k]/TotMBs.$$

28. (Original) A moving picture indexing and searching method using a motion activity describing technique, comprising the steps of:

classifying a motion vector of a macro block having a video name, time stamp, MC\_Not\_Coded mode, MC\_Coded mode and No\_MC\_Inter mode in accordance with f\_code, describing in terms of f\_code frequency obtained by a selected process, measuring a similarity by comparing each f\_code frequency with an at least one adjacent f\_code frequency, said comparison is performed in such a manner that said similarity is larger when said motion vector is closer to a maximum value and a minimum value of a vector range described by each f\_code and a reproduced motion compensation error is larger, and a weighted value is added to a frequency of f\_code larger than the relevant f\_code, and indexing and searching a moving picture using said f\_code frequency.

29. (Currently Amended) The method of claim 28, wherein said selected step comprises:

a first step of determining whether the MB\_Mode is an MC\_Mode;

a second step of increasing a counting value (f\_code\_c[1]) of a counter of f\_code 1 and determining whether a current MB is a last MB if the MB\_Mode is determined as Inter mode of No\_MC mode in said first step;

a third step of selecting the largest X-axis motion vector (mv\_x) and the largest Y-axis motion vector (mv\_y) as a largest motion vector (max\_mv), obtaining a maximum value k of f\_code by the selected max\_mv/16, increasing the counting value (f\_code\_c[k]) of the obtained f\_counter, and determining whether a current MB is the last MB if MB\_Mode is determined as MC\_Mode in said first step; and

a fourth step of increasing a number of macro blocks used in a motion feature range and repeatedly performing said first to third steps, and if the current MB is determined as a last MB in said second and third steps, obtaining a frequency of f\_code according to the following Equation ~~if the current MB is determined as a last MB in said second and third steps~~:

[Equation]

$$f\_code\_ratio[k] = f\_code\_c[k]/TotMBs.$$

30. (Original) A moving picture indexing and searching method using a motion activity describing technique, comprising the steps of:

describing a feature information in terms of a video name and a time stamp and a frequency of Inter mode of No\_MC and a frequency of Intra mode of No\_MC obtained by a selected process; and indexing and searching a moving picture using said feature information.

31. (Currently Amended) The method of claim 30, wherein said selected process comprises:

a first step of determining whether MC\_Mode is No\_MC mode;

a second step of determining whether said MB\_Mode is No\_MC\_inter mode, if said MC\_Mode is determined as No\_MC mode in said first step;

a third step of increasing counting value (no\_mc\_inter) of a counter for counting a frequency of No\_MC\_Inter mode if said MB\_Mode is determined as No\_MC\_Inter mode and determining whether a current MB is a last MB in said second step, and determining whether MB\_Mode is No\_MC\_Intra mode if said MB\_Mode is not determined as No\_MC\_Inter mode in said second step;

a fourth step of increasing counting value (no\_mc\_intra) of a counter for counting a frequency of No\_MC\_Intra mode if said MB\_Mode is determined as No\_MC\_Intra mode in said third step, and determining whether a current MB is a last MB if said MB\_Mode is not determined as No\_MC\_Intra mode; and

a fifth step of increasing number of macro blocks (TotMBs) used in a motion feature range and repeatedly performing said first to fourth steps if said current MB is not determined as a last MB in said third and fourth steps, and if said MB is determined as a last MB in said fourth step, obtaining a frequency (No\_MC\_Inter\_Ratio) of Inter mode of No\_MC and a frequency (No\_MC\_Intra\_Ratio) of Intra mode of No\_MC according to the following Equation if said MB is determined as a last MB in said fourth step.

Equations:

[Equation]

$$\text{No\_MC\_Inter\_Ratio} = \text{no\_mc\_inter} / \text{TotMBs}$$

$$\text{Intra\_Ratio} = \text{no\_mc\_intra} / \text{TotMBs}$$